

REMARKS

By this Amendment, claims 25, 29 and 30 are amended, claims 26-28 and 31-48 are cancelled, and claims 49-51 are amended. Thus, claims 25, 29, 30 and 49-51 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

In item 3 on page 3 of the Office Action, claims 25-48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith et al. (U.S. 6,192,407, hereinafter "Smith") in view of Shaffer et al. (U.S. 6,092,114, hereinafter "Shaffer") and further in view of Utsumi (U.S. 6,195,677). This rejection is believed to be moot with respect to claims 26-28 and 31-48 in view of the cancellation of these claims.

Without intending to acquiesce to this rejection, independent claims 25, 29 and 30 have each been amended in order to more clearly illustrate the marked differences between the present invention and the applied references. Accordingly, the Applicants respectfully submit that the present invention is patentable over the applied references for the following reasons.

The present invention provides a data distribution system which prevents an information terminal from being charged for higher quality data if the information terminal does not possess the reproduction capabilities to reproduce the higher quality data. For example, cellular phones have inferior image reproduction capabilities to those of a personal computer (PC). The cellular phone and PC are both information terminals which can transmit an information provision request for information such as image data to an information provider apparatus (e.g., a server). The PC can reproduce high resolution image data transmitted from the information provider apparatus in response to the information provision request. However, because the cellular phone does not possess the reproduction capabilities to reproduce high resolution image data, the cellular phone will not be able to reproduce the high resolution image data transmitted from the information provider apparatus and will still be charged for receiving this high resolution image data even though high resolution image data cannot be reproduced by the cellular phone.

On the other hand, if attempts were made to accommodate the reproduction capabilities of the cellular telephone by causing the information provider apparatus to

send lower resolution image data to all information terminals requesting image data, both the cellular phone and PC would receive lower resolution image data in response to an information provision request transmitted therefrom. However, in the this situation, because lower resolution image data is received by the PC to accommodate information terminals with inferior reproduction capabilities, the functions and reproduction capabilities of the PC would not be sufficient utilized.

To solve these problems, the present invention provides that an information provider apparatus, in response to an information provision request for multimedia information from an information terminal, converts data stored in the information provider apparatus that is detected to correspond to the requested information to data having a low quality which is adaptable to a reproduction capability of the information terminal. Although the information provider apparatus converts the detected data corresponding to the requested multimedia information to a low quality which is adaptable to the reproduction capability of the information terminal, the information provider apparatus does not alter the data format of the data which is reproducible by the information terminal.

That is, unlike conventional systems, the information provider apparatus does not convert the data to a different format when it converts the detected data to data having a quality which is adaptable to an information reproduction capability of the information terminal. Instead, a data conversion unit of the information provider apparatus converts the data to data having a low quality which is adaptable to the reproduction capability of the information terminal, but keeps the data corresponding to the information provision request in the same data format as the data which is reproducible by the information terminal.

For example, if the information terminal requests still image data as the requested multimedia data, the data conversion unit of the information provider apparatus reduces the pixel numbers so that the shape of the video image is reduced, i.e., so that the data quality is reduced. However, while the data quality of the requested still image multimedia data may be reduced, the data conversion unit reduces the data quality while maintaining the same data format as the format of the data before it was compressed,

thereby enabling data transmission of requested data in the range of the data processing abilities of the information terminal.

The present invention provides that the reproduction capability of the information terminal is determined by the specification of the information terminal that is automatically transmitted to the information provider apparatus from the information terminal when the information terminal transmits an information provision request for multimedia information including still picture data, moving picture data or audio data from the information provider apparatus.

The information provider apparatus then transmits the requested still picture data, moving picture data or audio data to the information terminal by detecting, from a data storage unit, data corresponding to the information requested in the information provision request.

The information provider apparatus also converts the detected data to data having a quality which is adaptable to an information reproduction capability of the information terminal which is determined by the specifications of the information terminal, where the converted data is in the same data format as the data which is reproducible by the information terminal.

Accordingly, while the information provider apparatus converts data corresponding to data requested by the information terminal to have a low quality which is adaptable to an information reproduction capability of the information terminal, the information provider apparatus does not convert a data format of the requested data to a data format which is reproducible by the information terminal.

Therefore, according to the data distribution system of the present invention, it is possible to transmit appropriate information having a quality which reflects the information reproduction capabilities of the information terminal by converting the requested information to the reproduction capabilities of the information terminal but without changing the data format of the requested information, and to appropriately charge for the transmitted data according to the information reproduction capabilities of the information terminal. In other words, an information user of the information terminal is not charged for higher quality versions of requested information if the information

user's information terminal does not possess the information reproduction capabilities to properly reproduce the higher quality versions of the requested information.

Independent claims 25, 29 and 30 recite the above-described features of the present invention. In particular, as described above, claims 25, 29 and 30 recite that the information terminal is operable to request distribution of multimedia information including still picture data, moving picture data or audio data in a predetermined format, and automatically transmit a specification of the information terminal when transmitting an information provision request that requests distribution of the information.

Further, claims 25, 29 and 30 recite the information provider apparatus as comprising a data conversion unit which is operable to convert the data detected by the data detection unit to data having a low quality which is adaptable to an information reproduction capability of the information terminal, where the converted data is in the same data format as the data which is reproducible by the information terminal.

In rejecting claim 25, the Examiner acknowledged that neither Smith nor Shaffer disclose or suggest an information provider apparatus comprising a data conversion unit which converts data corresponding to the requested information to data having a quality which is adaptable to an information reproduction capability of the information terminal as determined by the transmitted specification of the information terminal, where the converted data is in the same data format as the data which is reproducible by the information terminal. In an attempt to teach this feature, the Examiner applied Utsumi.

Utsumi discloses a data distribution server which includes a data exchange unit 10. The data exchange unit 10 provides service data to a requesting information terminal by converting the service data into a predetermined format based on the processing capability (attributes) of the information terminal or the communication ability of the network infrastructure (see Column 5, lines 17-34 and Column 21, line 57 to Column 22, line 28). In particular, Utsumi discloses that if the data exchange unit 10 determines that the information terminal has a high processing capability and a capability of expanding compressed data, the data exchange unit 10 compresses the service data and transmits the compressed service data to the information terminal. On the other hand, if the data exchange unit 10 determines that the information terminal has a low processing capability and no capability of expanding compressed data, the data exchange unit 10 transmits the

service data as it is without compressing the service data (see Column 5, lines 17-25 and Column 21, lines 6-17).

However, the compression method disclosed in Utsumi changes the data format of the requested data. That is, the compression method of Utsumi performs a reduction in data size (amount) by converting the data by code conversion techniques such as converting binary data into text data or replacing the centering of a character sequence by a blank character (see Column 5, lines 29-31).

On the other hand, as described above, the information provider apparatus of claims 25, 29 and 30 converts data corresponding to requested multimedia information to data having a low quality which is adaptable to an information reproduction capability of the information terminal, without changing the data format. Accordingly, the compression target of claims 25, 29 and 30 is multimedia data, where the data is converted to a low quality which is adaptable to an information reproduction capability of the information terminal. In contrast, Utsumi discloses that requested data is compressed by changing a data format of the requested data, or the requested data is not compressed at all and transmitted as it is.

Accordingly, the compression techniques of claims 25, 29 and 30 are different from that of Utsumi. As a result, claims 25, 29 and 30 provide the advantageous effect of preventing inequitable charging when an amount of data that exceeds the processing or reproducing capabilities of the terminal is transmitted to an information terminal.

For at least the foregoing reasons, the Applicant respectfully submits that Utsumi clearly does not disclose or suggest an information provider apparatus comprising a data conversion unit operable to convert the data detected by the data detection unit to data having a low quality which is adaptable to an information reproduction capability of the information terminal, where the converted data is in the same data format as the data which is reproducible by the information terminal.

Furthermore, the conversion of data disclosed in Shaffer is one which carries out conversion to a data format of requested data so that an information terminal which cannot process the original data format can process the converted format of the requested data. Therefore, the conversion technique of the data conversion unit of claims 25, 29 and 30, in which the quantity of data in the same format is reduced in order to prevent the

transmission of data that exceeds the processing ability of the information terminal, is also not disclosed or suggested by Shaffer.

Moreover, Smith also does not disclose the conversion of multimedia data as recited in the data conversion unit of claims 25, 29 and 30.

Accordingly, for at least the foregoing reasons, the Applicants respectfully submit that Smith, Shaffer and Utsumi clearly fail to disclose or suggest each and every limitation of claims 25, 29 and 30.

Therefore, no obvious combination of Smith, Shaffer and Utsumi would result in the inventions of claims 25, 29 and 30 since Smith, Shaffer and Utsumi, either individually or in combination, clearly fail to disclose or suggest each and every limitation of the invention of claims 25, 29 and 30.

Furthermore, it is submitted that the clear distinctions discussed above are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify Smith, Shaffer and Utsumi in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 25, 29 and 30.

Therefore, it is submitted that the claims 25, 29 and 30, as well as claims 49-51 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

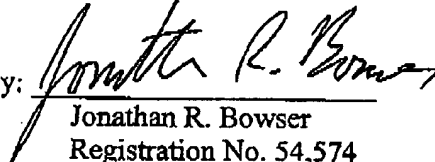
If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

A fee and a Petition for a two-month Extension of Time are filed herewith pursuant to 37 CFR § 1.136(a).

Respectfully submitted,

Hiroshi MIYAWAKI

By:


Jonathan R. Bowser
Registration No. 54,574
Attorney for Applicant

JRB/nrj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
March 5, 2007